Service Manual

JCB 7000 Series Fastrac

Section 1 - General Information
Section 2 - Care and Safety
Section 3 - Maintenance
Section A - Optional Equipment
Section B - Body and Framework
Section C - Electrics
Section D - Controls
Section E - Hydraulics
Section F - Transmission
Section G - Brakes
Section H - Steering
Section S - Suspension
Section T - Engine



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Contents Page No.

Introduction
About This Manual 1-1
Machine Model and Serial Number 1-1
Using the Service Manual 1-1
Units of Measurement 1-1
Section Numbering 1-1
Identifying your Machine 1-2
Machine Identification Plate 1-2
Component Identification Plates 1-3

Standard Torque Settings
Zinc Plated Fasteners and Dacromet Fasteners 1-6
Introduction 1-6
Zinc Plated Fasteners (golden finish) 1-7
Dacromet Fasteners (mottled silver finish) 1-8
Hydraulic Connections 1-9
'O' Ring Face Seal System 1-9
'Torque Stop' Hose System 1-12

Special Tools
Numerical List 1-13
Tool Detail Reference 1-17
Section B - Body and Framework 1-17
Section C - Electrics 1-24
Section E - Hydraulics 1-27
Section F - Transmission 1-32
Section G - Brakes 1-32
Section S - Suspension 1-32

Service Consumables
Sealing and Retaining Compounds 1-38

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Contents Page No.

Safety First
Important Information 2-1
The Operator Manual 2-1
Safety Warnings 2-1
Safety Check List 2-2
Safety - Yours and Others 2-2
General Safety 2-2
Operating Safety 2-4
Maintenance Safety 2-9

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Contents **Page No.**

Rountine Maintenance
Service Requirements 3-1
Introduction 3-1
Owner/Operator Support 3-1
Service/Maintenance Agreements 3-1
Initial Service and Inspection (100 Hours) 3-1
Obtaining Replacement Parts 3-2
Health and Safety 3-3
Lubricants 3-3
Battery 3-5
Service Schedules 3-7
Introduction 3-7
How to Use the Service Schedules 3-7
Calendar Equivalents 3-7
Pre-start Cold Checks, Service Points and Fluid Levels 3-8
Functional Test and Final Inspection 3-12
Fluids, Lubricants and Capacities 3-14
Coolant Mixtures 3-15
Fuel 3-15
Carrying Tools onto the Machine 3-17
Cleaning the Machine 3-18
Introduction 3-18
Preparing the Machine for Cleaning 3-18
Cleaning the Machine 3-19
Checking for Damage 3-21
Check the Machine Body and Structure 3-21
Check the Tyres 3-21
Check the Seat and Seat Belt 3-21
Check the Hydraulic Hoses and Fittings 3-21
Checking the ROPS Structure 3-22
Access Panels 3-23
Engine Covers 3-23
Panniers 3-23
Greasing 3-25
Introduction 3-25
Drive Shafts 3-26
Front 3-Point Linkage (Optional) 3-27
Front Axle Steering Swivels 3-28
Suspension Cylinder Pivots 3-29
Hydraulic Lift and 3-Point Linkage 3-30
Pick-up Hitch 3-31
Automatic Trailer Coupling (if fitted) 3-32
Air Conditioning and Heater 3-33
Cleaning the Fresh Air Filter 3-33
Cleaning the Recirculation Air Filter 3-34
Brakes 3-35
Checking the Foot Brake Fluid Level 3-35
Checking the Trailer Air Tank 3-36
Checking the Air Tank Warning Lights 3-36
Checking and Renewing Foot Brake Pads 3-37
Testing the Park Brake 3-39
Checking the Park Brake Pads 3-40

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			Raise/Lower Switch	
			Transport Switch	
			Cigar Lighter	
			Lighting Switches	
			ABS ECU	
2	Chassis Harness 332/T5513	3		⇨ *Fig 47. (C-44)*
	Main components connected to this harness:		Trailer Socket	⇨ *Fig 48. (C-45)*
			Heater Motor Fuse	⇨ *Fig 49. (C-46)*
			Fuel Tank Sender	⇨ *Fig 50. (C-47)*
			Induction Heaters	⇨ *Fig 51. (C-48)*
			Horn	
			Alternator	
			Engine ECU	
			Head Lights	
			Work Lights	
			Compressor Clutch	
			Rear Fender Harness	
			Steering Angle Sensor	
			Air Conditioning Pressure Switch	
			Washer Pumps	
			Suspension Sensors	
			Raise and Lower Switches and Solenoids	
			Radar Speed Sensor	
			Spool Valve Solenoids	
			Front Hitch Position Sensor	
			Coolant Level	
3	SAFIM Chassis Harness 332/S8010	1		⇨ *Fig 52. (C-50)*
	Main components connected to this harness:		Cab Interface	
			Oil Pressure Switch	
			Oil Pressure Switch	
			SAFIM Solenoid	
4	Pannier Harness 332-U8614	1		⇨ *Fig 53. (C-52)*
	Main components connected to this harness:		ABS Chassis/Pannier Interface	⇨ *Fig 54. (C-53)*
			ABS Front Modulator	
			ABS Rear Left Modulator	
			ABS Rear Right Modulator	
			Air Drier	

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Technical Data

External Hydraulics

Flow Rates

Total Pump Flow at maximum system pressure and 2200 engine rev/min.

Note: *When checking flow, be aware of the maximum flow through the spools (see below).*

Standard Pump	127 litres/min	28 UK gal/min	33.5 US gal/min
High Flow Pump	180 litres/min	39.5 UK gal/min	47.5 US gal/min

Maximum flow from each spool

Standard Spool Valve	100 litres/min	22 UK gal/min	26.4 US gal/min
High Flow Spool Valve	140 litres/min	30.8 UK gal/min	37 US gal/min

Pressures

Maximum system pressure at 1500 engine rev/min	210 bar	214 kgf/cm^2	3045 lbf/in^2
Pilot stand-by pressure - no service selected	18 bar	18.4 kgf/cm^2	260 lbf/in^2

Spool Valve

All external hydraulics spools	Electronic, 4 position double acting with provision for timed hydraulic kick-out and flow control.

Other Hydraulic Circuits

Note: *For technical data of other hydraulic systems, refer to the following sections of the Service Manual:*

Transmission	Section F
Steering	Section H
Suspension	Section S

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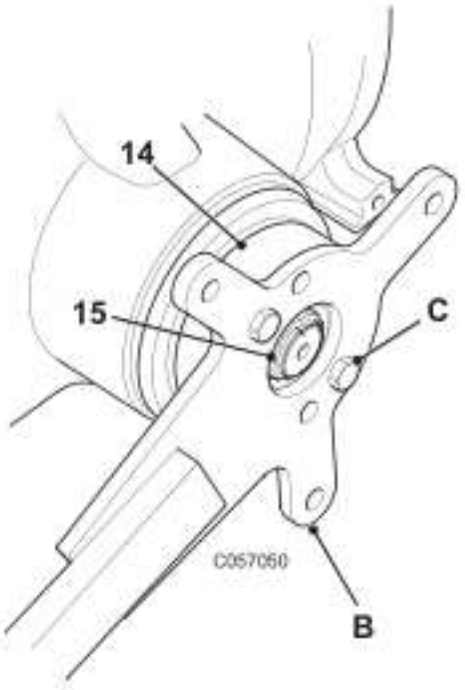


Fig 322.

14 Using rolling torque meter on pinion retaining nut, measure pinion rolling torque, disregard start up torque. Correct bearing pre-load will register 1.8 - 5.1Nm. If the measured figure is outside these limits, pre-load spacer must be changed and the rolling torque figure rechecked.

15 Note: If measured rolling torque figure is marginally below the minimum figure. It is possible to increase nut **15** torque to 735Nm (540lbf ft, 75kgf m.).

16 Remove pinion drive flange. Grease the lips of new pinion seal **21** and install using installation dolly **L** 998/M1600 (Service Tools)

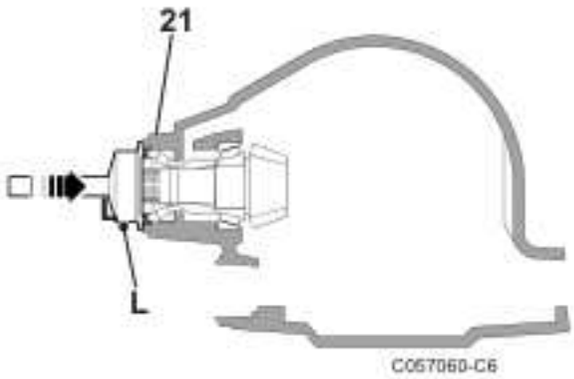


Fig 323.

17 Replace drive flange **14**, washer **16** and new retaining nut **15**. Refit flange spanner and torque nut to the correct figure. Stake flange of nut **15** into notches machined in pinion shaft using square tipped staking tool.

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2 Switch the Ignition `On'.

3 As the first instrument panel buzzer has finished sounding, engage the transport lock **T**.

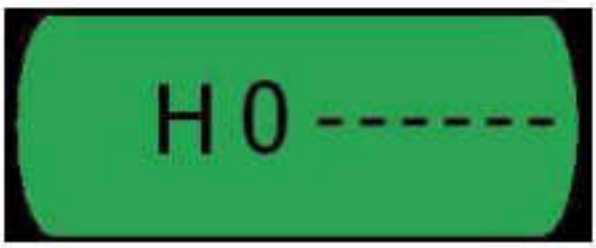
4 Before the second instrument panel buzzer has finished sounding, slowly cycle the green spool lever **1** from its central neutral position to extend **V**, then to retract **W**, and back to neutral **N**. ⇨ *Fig 35. (E-27)*

The instrument panel will display a code and begin to count down from 25 seconds.

Valve Slices Currently Configured

Upon accessing Configuration Mode the spool valve slices which are connected and configured will be displayed on the instrument panel. Slices configured are identified by the prefix `H'.

Some examples of valve slice configuration that may be seen on the instrument panel are as follows:



C071750

Fig 36. One or more slices connected but none yet configured. ('0' indicates Bosch state)



C071740

Fig 37. All six slices connected and configured correctly.



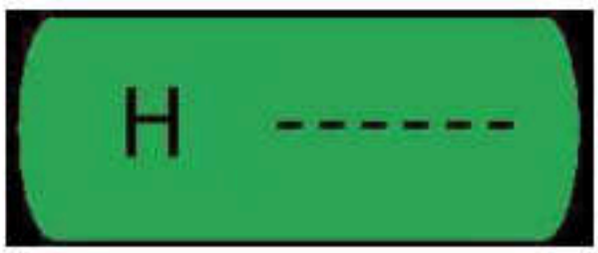
C071800

Fig 38. A Bosch default slice is connected ('0') and can be configured as either slice 2 or 5. Slices have been connected and configured to positions 1, 3. 4 and 6.



C071760

Fig 39. Slices 1, 2, 3, 4 and 6 (front hitch) configured. Slice 5 either not fitted or not connected.



C071730

Fig 40. Either: No slices connected, CAN2 wiring or supply fuse fault or non-compatible slice connected. Slices each need returning to Bosch state first using the following method:

Configuring `Bosch' Slices

The object of this procedure is to make sure that each valve slice is correctly identified to its proper position number on the Fastrac. ⇨ *Table 7. (E-27)* When configured, each valve slice will store this identity even if it is unplugged.

To wipe the slice memory it must be restored to Bosch state, ⇨ *Returning Configured Slices to Bosch State (E-31)*

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Earths

Table 49.

Connections: See ⇨ Fig 90. (🗋 C-125)	
1	**Roof Earth Point (CCA133)**
EP	⇨ Fig 81. (🗋 C-101)
GD	⇨ Fig 81. (🗋 C-101)
GE	⇨ Fig 81. (🗋 C-101)
GF	⇨ Fig 81. (🗋 C-101)
PE	⇨ Fig 86. (🗋 C-113)
PF	⇨ Fig 86. (🗋 C-113)
RA	⇨ Fig 87. (🗋 C-116)
RB	⇨ Fig 87. (🗋 C-116)
RC	⇨ Fig 87. (🗋 C-116)
RD	⇨ Fig 87. (🗋 C-116)
RE	⇨ Fig 87. (🗋 C-116)
RF	⇨ Fig 87. (🗋 C-116)
RG	⇨ Fig 87. (🗋 C-116)
RH	⇨ Fig 87. (🗋 C-116)
RJ	⇨ Fig 87. (🗋 C-116)
RP	⇨ Fig 87. (🗋 C-116)
RR	⇨ Fig 87. (🗋 C-116)
RS	⇨ Fig 87. (🗋 C-116)
RT	⇨ Fig 87. (🗋 C-116)
RU	⇨ Fig 87. (🗋 C-116)
RV	⇨ Fig 87. (🗋 C-116)
SL	⇨ Fig 88. (🗋 C-118)
VB	⇨ Fig 87. (🗋 C-116)
2	**Front Cab Earth Point 1 (CR38)**
SK	⇨ Fig 88. (🗋 C-118)
3	**Rear Cab Earth Point 1 (CCA135)**
BA	⇨ Fig 80. (🗋 C-98)
FB	⇨ Fig 81. (🗋 C-101)
GC	⇨ Fig 81. (🗋 C-101)
HD	⇨ Fig 82. (🗋 C-104)
PB	⇨ Fig 86. (🗋 C-113)
RM	⇨ Fig 87. (🗋 C-116)
RN	⇨ Fig 87. (🗋 C-116)
SA	⇨ Fig 87. (🗋 C-116)
4	**Rear Cab Earth Point 2 (CCA165)**
HP	⇨ Fig 82. (🗋 C-104)
KE	⇨ Fig 83. (🗋 C-106)
PA	⇨ Fig 85. (🗋 C-111)
5	**Rear Cab Earth Point 3 (CCA166)**
EA	⇨ Fig 81. (🗋 C-101)
RY	⇨ Fig 87. (🗋 C-116)
SB	⇨ Fig 87. (🗋 C-116)
TA	⇨ Fig 89. (🗋 C-121)
TB	⇨ Fig 89. (🗋 C-121)
TC	⇨ Fig 89. (🗋 C-121)
TD	⇨ Fig 89. (🗋 C-121)
TE	⇨ Fig 89. (🗋 C-121)
6	**Rear Cab Earth Point 4 (CS6)**
SN	⇨ Fig 88. (🗋 C-118)
7	**Switch Panel Earth Point (CCA137)**
EN	⇨ Fig 81. (🗋 C-101)
FG	⇨ Fig 81. (🗋 C-101)
FW	⇨ Fig 81. (🗋 C-101)
FX	⇨ Fig 81. (🗋 C-101)
HK	⇨ Fig 82. (🗋 C-104)
HX	⇨ Fig 82. (🗋 C-104)
HY	⇨ Fig 82. (🗋 C-104)
JF	⇨ Fig 82. (🗋 C-104)
MT	⇨ Fig 84. (🗋 C-109)
MV	⇨ Fig 84. (🗋 C-109)
MY	⇨ Fig 84. (🗋 C-109)
MZ	⇨ Fig 84. (🗋 C-109)
PD	⇨ Fig 86. (🗋 C-113)
RZ	⇨ Fig 87. (🗋 C-116)
SD	⇨ Fig 87. (🗋 C-116)
SE	⇨ Fig 87. (🗋 C-116)
VA	⇨ Fig 88. (🗋 C-118)
VF	⇨ Fig 88. (🗋 C-118)
8	**Chassis Earth 5 (ABS4)**
NH	⇨ Fig 84. (🗋 C-109)
NJ	⇨ Fig 84. (🗋 C-109)
9	**Engine Earth Point (M12)**
AV	⇨ Fig 79. (🗋 C-95)
K	⇨ Fig 79. (🗋 C-95)
11	**Chassis Earth M10 (CBN04)**
12	**Chassis Earth 4 (C40)**
BJ	⇨ Fig 82. (🗋 C-104)
BK	⇨ Fig 82. (🗋 C-104)
EK	⇨ Fig 81. (🗋 C-101)
FC	⇨ Fig 81. (🗋 C-101)
FR	⇨ Fig 81. (🗋 C-101)
FS	⇨ Fig 81. (🗋 C-101)
GZ	⇨ Fig 81. (🗋 C-101)
HB	⇨ Fig 82. (🗋 C-104)
HC	⇨ Fig 82. (🗋 C-104)
HE	⇨ Fig 82. (🗋 C-104)
HF	⇨ Fig 82. (🗋 C-104)
NC	⇨ Fig 84. (🗋 C-109)
PC	⇨ Fig 86. (🗋 C-113)
RK	⇨ Fig 87. (🗋 C-116)
RL	⇨ Fig 87. (🗋 C-116)

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